

REMARKS

In the Office Action dated March 11, 2003, the Examiner disapproved the proposed drawing correction to Fig. 1. The Examiner objected to claims 14, 23 and 24. The Examiner rejected claims 1, 4-9, 12-22, 25-31 and 33 under 35 U.S.C. § 112, second paragraph. The Examiner rejected claims 23, 24 and 32-36 are rejected under 35 U.S.C. § 112, first paragraph. The Examiner rejected claims 1, 4, 7-9, 12-14, 16, 17 and 29 under 35 U.S.C. § 102(b). Finally, the Examiner rejected claims 6, 25 and 28 under 35 U.S.C. § 103(a). In the Advisory Action dated June 10, 2003, the Examiner refused to enter the Amendment under 37 C.F.R. § 1.116, stating that it would require additional consideration and search. With this Amendment, claims 1, 5, 8, 9, 14, 22-24 and 33 have been amended, and claim 4 has been canceled without prejudice. After entry of this Amendment, claims 1, 5-9 and 12-36 are pending in the Application. It is respectfully submitted that the invention as defined by the claims is not anticipated or rendered obvious by the cited references taken singly or in any permissible combination for the reasons as set forth in more detail hereinafter. Reconsideration of the Application as amended is respectfully requested.

Since it is not necessary to show the voltage source in the drawing figures, the Applicants are not resubmitting a drawing change to include the voltage source. As a result, the Applicants have removed the reference to the voltage source in Fig. 1 in the specification. It is respectfully submitted that this change to the specification does not add new matter to the application. The Examiner's approval of the change to the specification is respectfully requested.

The Examiner objected to claims 1, 23 and 24 in the Office Action. The Examiner's proposed change to each claim has been adopted.

The Examiner rejected claims 1, 4-9 and 12-24 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that the Applicants regard as the invention. With respect to claim 1, the Examiner stated that "the substrate surfaces" in line 6 of the claim lacks sufficient antecedent basis. It is respectfully submitted that the Examiner previously accepted the use of "the substrate surfaces" in claim 1 at line 7 prior to the inclusion of "the substrate surfaces" in line 6 of the claim as

amended. To address the Examiner's concern, however, the Applicants have amended claim 1 in two places to refer to "the surfaces to be treated" in place of "the substrate surfaces."

The Examiner further stated that it was unclear in claim 14 whether the anode was operable to receive an activating voltage or the substrate was operable to receive an activating voltage. Claim 14 has been amended to clarify that it is the anode that is operable to receive the activating voltage. With respect to the Examiner's suggestion that the specification does not appear to shed light on this issue, the Examiner's attention is directed to the second full paragraph on page 3, the last full paragraph on page 4 and the first full paragraph on page 6. The substrate serves as the cathode, which would not receive an activating voltage.

The Examiner stated that it is unclear in claim 22 as to what "their potentials" referred to in the claim. The Examiner also stated that it is unclear as to what "near" means in the context of the claim. Claim 22 has been amended to more clearly state the elements therein. The claim now states that deflection elements are arranged at least one of in a region of a device component in which parasitic discharges could be formed due to potentials of the device component and around the at least one substrate and the discharge region. The deflection elements are electrically isolated from the device component and the at least one substrate. Thus, the Applicants have clarified that the potentials are those experienced by the device component. In addition, stating that the deflection elements are in a region of a device component or around the at least one substrate and the discharge region addresses the Examiner's concern with the term "near."

The Examiner correctly interpreted the dependency of claim 33 in the Office Action. The Applicants have corrected the dependency of the claim to claim 32.

Based upon the changes described above, it is respectfully submitted that claims 1, 14, 22 and 33 and their dependent claims are clear and definite and meet the requirements of 35 U.S.C. § 112, second paragraph.

The Examiner rejected claims 23, 24 and 32-36 under 35 U.S.C. § 112, first paragraph, as containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. In claim 23, the Examiner stated

that the means for activating the hollow-cathode glow discharge is not specified as being within or outside the discharge region in the specification. Similarly, in claim 24, the Examiner stated that the means for supplying electrical energy is not specified as being within or outside the discharge region in the specification. The Applicants have removed these respective features from claims 23 and 24. Therefore, this rejection is moot.

Although the Examiner did not indicate the presence of allowable subject matter in each of claims 5, 15, 18-24, 27 and 30-36, it is respectfully noted that none of these claims have been rejected based upon cited prior art. Since the rejections under 35 U.S.C. § 112 have been overcome by the present Amendment, it is respectfully submitted that each of these claims is allowable.

The Examiner rejected claims 1, 4, 7-9, 12-14, 16, 17, 26 and 29 under 35 U.S.C. § 102(b) as being anticipated by Yamada (JP 63-026373 A) and rejects claims 6, 25 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Yamada. The Examiner upheld these rejections in the Advisory Action. The Applicants obtained and submitted a verified translation of Yamada in their response to the previous Office Action.

It is respectfully submitted that Yamada fails to teach or suggest all of the features of claim 1 and its dependent claims 4, 6-9, 12, 13, 25 and 26. Claim 1 has been amended to state that the surfaces to be treated are supplied by at least one of two flat, parallel substrates and at least one continuously moving band-shaped substrate and wherein the surfaces to be treated form a hollow cathode used to enable a hollow-cathode glow discharge. Claim 4 has been canceled due to the addition of the language related to a continuously moving band-shaped substrate into claim 1. Claim 5 has been amended to include the features of claim 4 therein and to depend from claim 1. Since Yamada fails to teach or suggest any substrate other than a fixed tube 7, it is respectfully submitted that claim 1 and its dependent claims are allowable over the prior art of record.

In the Advisory Action, the Examiner states that a tube is nothing more than a band that has been given a desired shape and curvature, so the Examiner has broadly but reasonably interpreted the tube of Yamada to be "band-shaped" in claim 4, now canceled. The Examiner stated that the Applicants' argument that the Examiner has ignored the meaning of a

"band-shaped substrate" as known by those of skill in the art impermissibly imports limitations from the specification into the claims. The Applicants were not and are not arguing to import limitations from the specification into the claims. The Applicants merely pointed to the specification to show that the Examiner cannot reasonably interpret a tube to be a band-shaped substrate as that violates the meaning of a band-shaped substrate to one skill in the art. A band-shaped substrate is a substrate that is in the form of a continuous sheet. See also Echizen et al. Claim 1 specifies that one of the sources for the surfaces to be treated is at least one continuously moving band-shaped substrate. It is respectfully submitted that claim 1 and its dependent claims are allowable over the prior art of record.

Claim 8 is also allowable over the prior art of record. In the Office Action, the Examiner stated that the at least one substrate is grounded because it is connected to element 6, which the Examiner stated is a voltage source connected to ground. In the Advisory Action, the Examiner states that since the tube 7 of Yamada is connected to ground, albeit indirectly, the substrate is reasonably construed to be "grounded." It is respectfully submitted once again that one of skill in the art would not consider the tube 7 of Yamada to be grounded. The vessel 1 of Yamada is grounded. If the tube 7 were grounded in Yamada, no potential would exist between the anode and cathode. Nonetheless, the Applicants have attempted to address the Examiner's concern by specifying in claim 8 that the at least one substrate is at ground potential. In no way can one of skill in the art find that the tube 7 of Yamada is at ground potential. For the reasons set forth herein, and from dependency from claim 1, the invention of claim 8 is patentable over Yamada.

Claim 9 has been amended to state that a magnitude of a voltage between the at least one substrate and a plasma formed by said electric discharge is between one and 3000 volts. The typographical error that the voltage is a voltage applied has been removed because a voltage is clearly not applied between the substrate and the plasma. The hollow-cathode glow electric discharge is, as described in claim 1, activated by a voltage. A voltage is then formed between the substrate and the plasma by the discharge, as correctly described by the remainder of the claim. See also Applicants' specification at p. 4, last full para. It is respectfully submitted that the Examiner's position in the Advisory Action that Yamada's teaching that a DC bias voltage of

300 to 450 volts is applied to the substrate teaches or suggests the feature of claim 9 mischaracterizes the feature of claim 9. Claim 9 states that the magnitude of a voltage between the at least one substrate and a plasma formed by said electric discharge is between one and 3000 volts. In Yamada, a bias voltage is applied between the tube 7 and the vessel 1. The voltage between the tube 7 and the plasma is not mentioned. Further, claim 9 refers to the voltage formed by the electric discharge, which is different from the applied voltage. There is no teaching or suggestion of the voltage between the tube 7 and the plasma formed by an electric discharge. It is respectfully submitted that claim 9 is allowable over the prior art of record both by dependency from claim 1 and because Yamada fails to teach or suggest the feature of claim 9.

Further, it is respectfully submitted that Yamada fails to teach or suggest all of the features of claim 14 and its dependent claims 16, 17, 28 and 29. Claim 14 has been amended to clarify to claim that the substrate surfaces are supplied by at least one of two flat, parallel substrates and at least one continuously moving band-shaped substrate. It is respectfully submitted that Yamada fails to teach or suggest this feature of claim 14 for the reasons stated with respect to claim 1. For the foregoing reasons, the invention of claim 14 and its dependent claims is neither taught nor suggested by the prior art of record.

It is respectfully submitted that this Amendment traverses and overcomes all of the Examiner's objections and rejections to the application as originally filed. It is further submitted that this Amendment has antecedent basis in the application as originally filed, including the specification, claims and drawings, and that this Amendment does not add any new subject matter to the application. Reconsideration of the application as amended is requested. It is respectfully submitted that this Amendment places the application in suitable condition for allowance; notice of which is requested.

If the Examiner feels that prosecution of the present application can be expedited by way of an Examiner's amendment, the Examiner is invited to contact the Applicants' attorney at the telephone number listed below.

Respectfully submitted,

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